



















SHEETMETAL SYMBOLS	
	 SUPPLY DUCT UNDER POSITIVE PRESSURE
	 SUPPLY DUCT NEGATIVE POSITIVE PRESSURE
	 ACCESS DOOR IN DUCT
	 SMOKE DETECTOR HEAD IN DUCT
	 DUCT SIZE (FIRST SIZE INDICATES PLAN SIZE)
	 DUCT FLEXIBLE CONNECTION
	 MOTORIZED DAMPER
	 ACOUSTIC LINING DUCTWORK
	 SQUARE FEET

A. GENERAL NOTES

A. GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL WORK NECESSARY TO FURNISH, OFFLOAD, STORE, STAGE, REMOVE AND INSTALL EQUIPMENT INCLUDING MATERIALS AND SERVICES TO MAKE INSTALLATION COMPLETE, FUNCTIONAL AND OPERATIONAL.
2. AS PART OF THIS CONTRACT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CERTAIN EQUIPMENT, APPURTENANCES AND MATERIALS WHICH ARE PROVIDED BY THE PORT AUTHORITY (PA), AS DELINEATED ON THESE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VALVES, ACTUATORS, CONTROL WIRING, CONTROL DEVICES, RACKS, SUPPORTS, VENTILATION SYSTEMS, ETC., AS SPECIFIED IN THE PA REQUIREMENTS AND RECOMMENDATIONS.
3. THE CONTRACTOR SHALL INCORPORATE ALL PERTINENT INFORMATION OF THE PA INTO ITS SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE PA PRIOR TO APPROVAL. SUCH INFORMATION SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING: LOCATION, DIMENSIONS, WEIGHTS, OPERATIONAL AND PHYSICAL PROPERTIES, CONTROLS, ELECTRICAL WIRING AND POWER REQUIREMENTS FOR EACH PIECE OF EQUIPMENT WIRING TERMINATIONS.
4. THE CONTRACTOR SHALL COORDINATE WITH THE VENDORS OF THE PA FURNISHED EQUIPMENT FOR THE DELIVERY, RECEIPT AND PROPER HANDLING AND INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO ASSURE PROPER TECHNICAL SUPPORT FROM THE APPLICABLE MANUFACTURER(S) TO ENSURE PROPER INSTALLATION OF THE EQUIPMENT AND FULL COMPLIANCE WITH THE REQUIREMENTS OF ALL EQUIPMENT AND COMPONENTS INSTALLED BY HIM UNDER THIS CONTRACT.
5. THE CONTRACTOR SHALL INSPECT, AND IF ACCEPTABLE, APPROVE ALL EQUIPMENT AND MATERIALS PROVIDED BY THE PA PRIOR TO HANDLING, STORING AND INSTALLING.
6. REFER TO THE CONTRACT SPECIFICATIONS FOR THE LIST OF REFERENCE DOCUMENTS, PERFORMANCE SPECIFICATIONS OF THE EQUIPMENT, APPURTENANCES AND MATERIALS FURNISHED.
7. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITIES FOR TIME LOSS OR DAMAGE OF ANY OF THE PA FURNISHED EQUIPMENT DUE TO HIS NEGLIGENCE, THE NEGLIGENCE OF HIS ENGINEER, PLUS LOST OR REPLACE SUCH EQUIPMENT TO THE SATISFACTION OF THE OWNER. THERE SHALL BE NO AWARD OR ANY DELAY TO THE CONTRACT SCHEDULE RESULTED FROM THE LOSS OF DAMAGE.
8. THE CONTRACTOR SHALL SUBMIT DETAILED CONSTRUCTION PHASING PLAN PRIOR TO START OF WORK UNDER THIS CONTRACT, INCLUDING THE METHODOLOGY FOR THE REMOVAL OF MATERIAL. THE CONTRACTOR SHALL DETAIL ALL TEMPORARY STRUCTURES AND EQUIPMENT NECESSARY FOR THE PROTECTIVE ENCASEMENT OF EXISTING EQUIPMENT WITH THE RISK OF DAMAGING ANY STRUCTURE, EQUIPMENT OR PERSONNEL.
9. THE CONTRACTOR SHALL PROVIDE ALL PIPE HANGERS AND EQUIPMENT SUPPORTS TO COMPLY WITH SEISMIC RESTRAINTS REQUIRED BY LOCAL LAW 17FS.
10. ALL MECHANICAL, AND ELECTRICAL WORK SHALL BE FREE FROM DEFECTS, WORKMANSHIP AND MATERIAL DEFECTS, FROM DATE OF FINAL ACCEPTANCE AND SHALL MEET ALL LOCAL CODES AS STATED IN THE CONTRACT. THE CONTRACTOR TO BE MADE AWARE THAT ANY DEFECTS, THE CONTRACTOR TO BE MADE AWARE THAT ANY DEFECTS WILL BE REPAIRED BY ADDITIONAL COST. UPON COMPLETION OF THE WORK UNDER THIS CONTRACT, THE CONTRACTOR SHALL REMOVE ALL EXCESS EQUIPMENT, SURPLUS MATERIAL AND SCRAP LEAVING THE WORK IN PERFECT CONDITION.

B. NOTICE TO BIDDERS

1. THE SPECIFICATIONS AND DRAWINGS ARE ANTICIPATED TO SERVE JOINTLY AS A BASIS UPON WHICH THE CONTRACTOR SHALL SUBMIT A CONTRACT PRICE FOR THE MATERIAL AND LABOR PROVISIONS.
2. WHEN CONFLICTS OCCUR IN THE SPECIFICATIONS OR ON THE DRAWINGS, OR EITHER, THE ITEMS GRANTED QUANTITY OR HIGHER COST SHALL BE PROVIDED.
3. THE CONTRACTOR SHALL PROVIDE ALL ITEMS OF LABOR OR MATERIALS SPECIFICALLY INDICATED, OR REQUIRED TO COMPLETE THE INTENDED INSTALLATIONS.
4. THE CONTRACTOR SHALL COORDINATE HIS WORK IN ORDER THAT CONFLICTS IN SPACE UTILATIONS
5. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THIS WORK WITH ITS COMPLETION TIME AND FINAL ACCEPTANCE, AND SHALL REPLACE ANY DAMAGED, LOST OR STOLEN ITEMS WITH IDENTICAL REPLACEMENTS, WITHOUT ADDITIONAL COST TO THE OWNER.
6. ALL ACCESS TO TENANT AREAS SHALL BE PERFORMED ON OTHER THAN NORMAL WORKING HOURS.
7. THE CONTRACTOR SHALL NOTIFY THE OWNER WHEN SHUTDOWN OF EXISTING SYSTEMS BECOMES NECESSARY. SHUTDOWN TIME SHALL BE KEPT TO A MINIMUM.
8. THE CONTRACTOR WILL BE HELD TO HAVE VISITED THE SITE AND EXAMINED THE EXISTING CONDITIONS OF OTHER TRADES AND OF GENERAL CONSTRUCTION TRADES TO BE AWARE OF THE SITUATION INVOLVED. THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS GIVEN ON THE DRAWINGS AND RECORDS TO BE ACCURATE AND ALL EXISTING CONDITIONS AFFECTING THE PROPER INSTALLATION OF HIS WORK.
9. THE WORK UNDER THIS CONTRACT SHALL BE PERFORMED AND COORDINATED CONCURRENTLY WITH WORK OF OTHER TRADES SO AS NOT TO DELAY THE OVERALL PROJECT OR WORK OF OTHER TRADES.

SHOP DRAWING & EQUIPMENT SUBMISSIONS

1. ONE SET OF SEPIAS FOR DUCTWORK, PIPING LAYOUT AND CERTIFIED EQUIPMENT MANUFACTURER'S DATA SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO BEGINNING WORK. SUBMIT THREE SETS OF CATALOG CUTS FOR FANS, AIR CONDITIONING UNITS, PIPEHANGERS, INSULATION, DIFFUSERS, PUMPS, MISC. ACCESSORIES, ETC.
2. COORDINATE WITH THE WORK OF OTHER TRADES.
3. AIR BALANCING AND TESTING. SUBMIT REPORT AS SPECIFIED
4. SHOP DRAWINGS SHALL BE $3/8" = 1'-0"$ SCALE.
5. SUBMIT AIR HANDLER UNIT HANGING DETAILS

RECORD DRAWINGS

1. A REPRODUCIBLE RECORD DRAWING SHALL BE SUPPLIED UPON WHICH CORRECTIONS HAVE BEEN MADE TO PROVIDE AN ACCURATE AND COMPLETE RECORD OF THE WORK AS INSTALLED. A REPRODUCIBLE COPY OF THIS DRAWING SHALL BE PROVIDED TO THE OWNER WHEN THE INSTALLATION IS COMPLETE.
- CODES, PERMITS AND INSPECTION**
1. ALL WORK SHALL MEET OR EXCEED THE LATEST REQUIREMENT OF THE NEW YORK CITY BUILDING CODE, NATIONAL ELECTRICAL CODE, THE UPWA AND OTHER CITY AUTHORITIES EXERCISING JURISDICTION OF THE WORK OF THIS PROJECT.
 2. COMPLIANCE WITH APPLICABLE CITY AND STATE LAWS AND REGULATIONS.
 3. COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) REQUIREMENTS.
 4. SECURE AND PAY FOR ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES AND TRANSMIT SAME TO THE OWNER AT THE COMPLETION OF THE WORK.

GUARANTEES

1. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR OTHER DEFECTS. ALL DEFECTIVE MATERIAL OR WORKMANSHIP, AS WELL AS ACCESS TO THE WORK, SHALL BE REPLACED AND REPAIRED. ALL TRADES RESULTING FROM SUCH WORK SHALL BE REPLACED OR REPAIRED FOR THE DURATION OF THE GUARANTEE PERIOD.
2. THE GUARANTEE PERIOD SHALL BE FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE, WHICH SHALL BE THE DATE OF FINAL PAYMENT OR THE DATE OF FORMAL NOTICE OF ACCEPTANCE, WHICHEVER IS EARLIER.
3. CERTIFICATION SHALL BE FOR ONE (1) YEAR FROM THE DATE OF ACCEPTANCE, WHICH SHALL BE THE DATE OF FINAL PAYMENT OR THE DATE OF FORMAL NOTICE OR ACCEPTANCE, WHICHEVER IS EARLIER.

REMOVALS AND

1. THE CONTRACTOR SHALL REMOVE, RELOCATE, REPLACE, ADJUST, ADAPT AND MODIFY EXISTING EQUIPMENT AND/OR SYSTEMS AS REQUIRED BY THE DRAWINGS OR SPECIFICATION, AND AS MAY BE REQUIRED WHEN THE COMPLETION OF WORK IN THE CONTRACT OR OTHER CONTRACT WORK.
2. ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE.

WORK INCLUDE UNDER OTHER :

- ITEMS OF WORK WHICH SHALL BE INCLUDED UNDER OTHER SECTIONS OF WORK ARE AS FOLLOWS:
- A) ELECTRICAL WIRING FOR POWER.
 - B) PROVISION OF ELECTRICAL DISCONNECT SWITCHES OR FUSES (UNLESS FURNISHED INTEGRALLY WITH EQUIPMENT).

I. FUEL HANDLING SYSTEMS

- 1. DESCRIPTION
 - A) PROMOTE FUEL OIL HANDLING SYSTEMS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 2. WORK INCLUDED
 - A) FIELD FABRICATED FUEL OIL RECTANGULAR STORAGE TANKS.
 - B) FUEL OIL MANAGEMENT SYSTEM AND LEVEL CONTROL CENTER
 - C) MAIN TANK GAUGE AND LEAK MONITORING SYSTEM
 - D) FUEL OIL PUMPING AND STRAINING SET
 - E) FILTRATION, DENOISING AND FUEL STABILIZATION SYSTEM
 - F) 18" HEADER SYSTEM
 - G) FUEL OIL SPECIALTIES
 - H) PIPING, VALVES AND ACCESSORIES, SPECIFICATION SECTION 1550.3.
 - I) UNDERGROUND PIPING SPECIFICATION SECTION 1550.3.

3. SUBMITTALS

- A) SUBMIT FULL TECHNICAL RATING DATA, CATALOG CUTS, MODEL NUMBERS, DIMENSIONAL INSTALLATION DETAILS, CAPACITIES, CONSTRUCTION DETAILS, PIPING DETAILS, WIRING DIAGRAMS AND INSTALLATION INSTRUCTIONS.
- B) SUBMIT SHOP DRAWINGS OF THE FIELD FABRICATED TANK FOR APPROVAL. THE SHOP DRAWINGS SHALL INDICATE THE TANK CONSTRUCTION DATA, PERFORMANCE DATA, DIMENSIONS, LUGGER INSTALLATION, ALL DETAILS OF ANGLE IRON BRACKETS AND PIPING, LOCATE ALL WELD JOINTS, TAPPING CONNECTION AND LOCATION OF THE TAPPINGS.
- C) SYSTEM VENDOR SHALL COORDINATE PRODUCT DATA PRESENTED BY LEAK MONITORING SYSTEM AND FUEL MANAGEMENT SYSTEM. NO FIELD FABRICATED TANKS TO PROVIDE A COMPREHENSIVE SET OF INTER-~~RELATIONSHIP~~ DRAWINGS WHICH WILL SERVE AS THE BASIS FOR THE TANK DESIGNER AND INSTALLER. THE TANKER AND INSTALLATION BY MECHANICAL CONTRACTOR DESIGNATED BY THE OWNER.

J. PRODUCTS

1. FIELD FABRICATED DUEL OR RECTANGULAR STORAGE TANKS
 - a) PROVIDE FUEL OIL STORAGE TANKS OF SIZE AND CAPACITY AS INDICATED ON THE PLANS. TANKS SHALL BE OF RECTANGULAR CONSTRUCTION AND SHALL BE PROVIDED WITH A 6" DIA. MANHOLE IN THE TOP. TANK SHALL BE PROVIDED WITH PIPE AND FITTINGS FOR FILL, VENT, DRAIN, AND TRANSFER PIPING. TANKS SHALL BE PROVIDED WITH OVERFILL ALARMS, AND TWO (2) SPARES. TANKS SHALL BE CONSTRUCTED OF 5/16" PLATE OR HEAVIER. FIELD-FABRICATED TANKS SHALL BE MADE UP BY BENDING THE PLATES OR BY USING ANGLES. MINIMUM RIVET DIA. SHALL BE MADE UP BY BENDING THE PLATES. RIVETS SHALL BE SPACED NOT MORE THAN 2-1/4" CENTER TO CENTER. ALL FLAT SURFACES OF RECTANGULAR TANKS SHALL BE BRACED BY STRUCTURAL MEMBERS OR ROOFS. WHEN STRUCTURAL MEMBERS ARE USED, THE RIVET PITCH SHALL NOT EXCEED SIX INCHES.
 - b) PLANT OVERFLOW OF TANKS WITH 1 COAT OF BITUMASTIC.
 - c) PROVIDE STEEL LADDERS INSIDE AND OUT FOR EACH RECTANGULAR TANK.
 - d) MANHOLE COVER TO BE PROVIDED WITH BRASS BOLTS AND METALLIC GASKETS.
 - e) MANHOLE

D) REVERSE

- 7) ALL ANCHORS SHALL BE WELDED TO SIDES OF THE TANK TO ANCHOR THE TANKS TO THE CURB. PROVIDE AND COORDINATE THE ANCHOR DETAILS WITH THE CONCRETE SUBCONTRACTOR.
- 6) RECTANGULAR TANKS TO BE BUILT IN COMPLIANCE WITH NEW YORK CITY BUILDING CODE REGULATIONS.
- 5) HYDROSTAT TAGS TO 25 PSI FOR A ONE-HOUR DURATION AND WITNESSED BY THE ENGINEER AND P.A. REPRESENTATIVE.
- 4) SUBMIT SHOP DRAWINGS OF THE TANK FOR APPROVAL. THE SHOP DRAWINGS SHALL INDICATE THE SIZE, CONSTRUCTION DATA, TAPPING CONNECTIONS AND LOCATION OF THE TAPPINGS.
- 3) PROVIDE FABRICATORS WARRANTY FOR ONE (1) YEAR FROM DATE OF OWNER'S ACCEPTANCE OF FUEL OIL SYSTEM, AGAINST FAULTY MATERIAL OR WORKSMANSHIP.

2. FUEL OIL SPECIALTIES

- A) FILL LINE: STORAGE TANK FILL LINE SHALL TREATMENT IN A GALVANIZED, CAST RST FILL BOX WITH THREADED BRASS CAP AND OIL TIGHT GASKET TO MAKE IT WATERPROOF. FILL BOX SHALL BE 12" DIA. FILL BOX SHALL BE PROTECTED AT GRADE BY CONCRETE CURB. FILL BOX AND STREET BOX SHALL BE EQUAL TO PREPARED UTILITIES MFG. CORP. TYPE "W" AND TYPE 1258A RESPECTIVELY.
- B) VENT LINE: THE VENT LINE SHALL TERMINATE AND BE MOUNTED FLUSH IN THE OUTSIDE WALL THERE SHALL BE SIGN ON THE PLANS, USING A 3" CAST ALUMINUM VENT BRICK COAL TO PREFERRED UTILITIES.
- C) FOOT VALVE: PROVIDE ON TANK SUNCTION STUB A 2" BRONZE, SINGLE POPPET FOOT VALVE WITH LAPPED-IN SEAT, AND 20 MESH MOUNT SORLED. FOOT VALVE SHALL BE EQUAL TO PREPARED UTILITIES TYPE 900. TYPICAL FOR EACH TANK.
- D) THE FILL AND VENT LINES SHALL BE SUITABLY IDENTIFIED BY ONE-PIECE BRONZE NAME PLATE APPROXIMATELY 4" X 6" IN SIZE.

PREFERRED

- 5) PROVIDE LEAK DETECTION SWITCHES EQUAL TO PREFERRED UTILITIES MODEL R58-WFM FOR THE FOLLOWING POINTS: ONE UNIT IN EACH, BOTTOM OF VERTICAL MASONRY FUEL OIL PIPING, LEAK DETECT AND ONE UNIT IN EACH, FUEL OIL AND AIR FILTRATION SET.
- 6) PROVIDE LEAK DETECTION SWITCHES EQUAL TO PREFERRED UTILITIES MODEL HD-A1 LEAK DETECTION SENSOR WITH LEAK DETECTOR TEST MOUNT TO MONITOR FUEL OIL LEAKAGE AT THE SLUMP PIT IN THE TANK ROOM. IN THE TWO SLUMP PITS IN THE TANK ROOM AND ONE IN EACH, SUMP OF THE SUMP OF THE TANK ROOM. CONNECTS TO THREE (3) LEAK SENSORS.
- 6) PROVIDE LOW LEVEL SWITCH EQUAL TO MCCORMACK & MILLER MODEL 80 TO MONITOR LOW LEVEL IN THE GENERATOR FUEL OIL HEADER PIPE.
- 6) PROVIDE HIGH LEVEL SWITCH EQUAL TO MERCEID MODEL D4H-521-3 TO MONITOR THE HIGH LEVEL OF FUEL IN THE GENERATOR FUEL OIL HEADER PIPE.
- 6) PROVIDE HIGH LEVEL SWITCH EQUAL TO PREFERRED UTILITIES MODEL PLS-1 TO MONITOR

1) ROOMS: 11

- 1) PROVIDE MOTORIZED BALL VALVES, 3" BODY, TO ALLOW THE AUTOMATIC TANK FILL TANKS.
- 2) PROVIDE MOTORIZED BALL VALVES, 2" BODY, TO ALLOW THE MAIN TANK SELECTION FOR THE TANK SUPPLYING THE FUEL OIL TRANSFER PUMP SET. PROVIDE VALVES FOR EACH OF THE TANKS.
- 3) PROVIDE MOTORIZED BALL VALVES, 2" BODY, TO ALLOW THE MAIN TANK SELECTION FOR RETURNING THE FUEL OIL FROM THE SYSTEM. PROVIDE VALVES FOR EACH OF THE TANKS.
- 4) PROVIDE MOTORIZED BALL VALVES, 2" BODY, TO ALLOW THE MAIN TANK SELECTION FOR RETURNING RUOIL OR OIL FROM THE TRANSFER PUMP SET. PROVIDE VALVES FOR EACH OF THE TANKS.

5) PROVIDE MOTORIZED BALL VALVES, 2" BOO
SUPPLYING FUEL OIL TO THE FUEL ENTRY

- 6) PROVIDE MOTORIZED BALL VALVES, 2" BODY, TO ALLOW MAN TANK SELECTION FOR RETURNING TREATED OIL TO THE MAN TANK FROM THE FILTRATION PUMP SET.
- 7) PROVIDE MOTORIZED BALL VALVES, 2" BODY, TO ALLOW MAN TANK SELECTION FOR RETURNING RELIEF OIL FROM THE FUEL TANK TO THE PUMP SET.
- 8) PROVIDE MOTORIZED BALL VALVE, 2" BODY, TO ALLOW THE DRAINING OF THE FUEL OIL HEADER IN CASE OF FIRE IN THE GENERATOR ROOM.
- 9) VALVES SHALL HAVE CARBON STEEL, 150 # CLASS, BODY, STAINLESS STEEL BALL AND SEAT WITH SEAT AND BALL END, AND FLANGED CONNECTIONS. VALVES SHALL BE WATTS 1501 OR APPROVED EQUAL.
- 10) ELECTRIC ACTUATORS SHALL BE DESIGNED FOR 120 VAC POWER TO OPEN, POWER TO OPERATOR, AND SHALL HAVE ELECTRICAL INTERLOCK SWITCH AT EACH END OF TRAVEL TO PREVENT DAMAGE TO THE VALVE.

APPROVED EQUAL

- K) PROVIDE PRESSURE SAFETY SHUTOFF VALVES WITH FUSIBLE LINK HANDLES ON THE INLET AND OUTLET OF EACH TRANSFER PUMP SET, THE FUEL OIL TREATMENT PUMP SET AND ON THE SUPPLY PIPE BEFORE THE HEATER IN THE EXHAUST VAPOR ROOM.
 - L) PROVIDE A FUEL OIL VENT PROTECTOR, 2' SIZE, ON THE VENT FOR THE HEADER.
 - M) PROVIDE A 2" VACUUM BREAKER IN THE VENT LINE.
- 5. MAIN TANK GAUGING AND LEAK MONITORING SYSTEM**
- A) PROVIDE AND INSTALL FOR EACH OF THE TWO (2) FUEL OIL STORAGE TANKS A TANK GAUGING AND LEAK MONITORING SYSTEM THAT CONTINUOUSLY INDICATES THE TANK CONTENTS AND MONITORS THE TANK FOR UNDESIRABLE LOW LIQUID LEVELS (GALLONS PER TANK) AND TANK OVERFLOW. SYSTEM SHALL BE EQUAL TO PREPARED UTILITIES MODEL TO C-103-A-SN-7NT.
 - B) FINISH FOR ELEVATION TANKS AS NOTED.

5) PROVIDE FOR EACH TANK A LEVEL TRANSDUCER TO INTERFACE WITH THE TANK GAUGE IN THE FUEL MANAGEMENT PANEL. LEVEL TRANSDUCER SHALL BE INTRINSICALLY SAFE. SHALL PROVIDE 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031

- c) PROVIDE A TOTAL OF ELEVEN (11) LAKE SENSORS FOR MONITORING OF THE MAIN PULP TANK ROOM FLOOR AROUND THE FOUR (4) SIDES OF THE TANKS, ONE (1) IN THE SLUMP